IN THE CLAIMS

Please amend the claims as follows:

1-6.   cancelled

1   7.   (original) A computer program product residing in a computer storage medium for
2   performing power routing on a voltage island within an integrated circuit chip, said computer
3   program product comprising:

4   program code means for generating a first robust power grid for a voltage island
5   on metal levels 1 to N-1;

6   program code means for generating a second robust power grid for said voltage
7   island on metal levels N and above;

8   program code means for determining a bounding region of said second robust
9   power grid; and

10   program code means for routing a plurality of shortest distance connections from
11   a plurality of power sources to said second robust power grid.

1   8.   (original) The computer program product of Claim 7, wherein said second robust power
2   grid is a power segment.

1   9.   (original) The computer program product of Claim 7, wherein a number of power
2   segments to be generated on said metal level N and above is determined by determining the
3   product of a number of said power sources and a number of connections to be made per power
4   source.

1   10.   (original) The computer program product of Claim 7, wherein said computer program

2   product further includes program code means for determining a bounding region of said second

3   robust power grid.

1   11.   (original) The computer program product of Claim 7, wherein said program code means

2   for generating a second robust power grid further includes:

3   program code means for obtaining a count of power source shapes of an identical

4   voltage polarity on a chip;

5   program code means for identifying a chip position at which said voltage island

6   is located;

7   program code means for determining and generating a bounding region on top of

8   said voltage island on which said routing is to be performed; and

9   program code means for generating power grids within said bounding region.

1   12.   (original) The computer program product of Claim 7, wherein said program code means

2   for routing further includes:

3   program code means for obtaining a plurality of source points to form an group_A;

4   program code means for dividing said group_A based on connection per source

5   information;

6   program code means for obtaining target power shapes for said second robust

7   power grid on metal level N and above to build a group_B; and

8   for a given middle shape s in said group_A, program code means for performing

9   ShapeRouting to route from s to a shape t in said group_B.

1   13.   (original) A computer system for performing power routing on a voltage island within an

2   integrated circuit chip, said computer system comprising:

3   means for generating a first robust power grid for a voltage island on metal levels

4   1 to N-1;

5   means for generating a second robust power grid for said voltage island on metal

6   levels N and above;

7   means for determining a bounding region of said second robust power grid; and

8   means for routing a plurality of shortest distance connections from a plurality of

9   power sources to said second robust power grid.

1   14.   (original) The computer system of Claim 13, wherein said second robust power grid is a

2   power segment.

1   15.   (original) The computer system of Claim 13, wherein a number of power segments to be

2   generated on said metal level N and above is determined by determining the product of a number

3   of said power sources and a number of connections to be made per power source.

1   16.   (original) The computer system of Claim 13, wherein said computer system further

2   includes means for determining a bounding region of said second robust power grid.

1   17.   (original) The computer system of Claim 13, wherein said means for generating a first

2   robust power grid further includes:

3   means for obtaining a count of power source shapes of an identical voltage polarity
4   on a chip;

5   means for identifying a chip position at which said voltage island is located;

6   means for determining and generating a bounding region on top of said voltage
7   island on which said routing is to be performed; and

8   means for generating power grids within said bounding region.

1   18.   (original) The computer system of Claim 13, wherein said means for routing further
2   includes:

3   means for obtaining a plurality of source points to form an group_A;

4   means for dividing said group_A based on connection per source information;

5   means for obtaining target power shapes for said second robust power grid on
6   metal level N and above to build a group_B; and

7   for a given middle shape s in said group_A, means for performing shaperouting
8   to route from s to a shape t in said group_B.

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